

**VERIZON VIRGINIA INC.
PANEL TESTIMONY ON UNBUNDLED
NETWORK ELEMENT AND INTERCONNECTION COSTS**

1 A. Two recurring cost components were identified: a non-mileage-sensitive
2 component attributable to terminating electronics at the central office and at
3 the customer's premises, and a mileage-sensitive component attributable to
4 fiber optic cable and the associated structure. The workpapers for this rate
5 element can be found in at VZ-VA CS, Vol. III, Part B-7.

6
7 **Q. Were the costs of DS3 high capacity loops geographically deaveraged?**

8 A. No. As noted above, DS3 high capacity loops typically are provided to large
9 business customers located in the business sections of large urban areas.
10 Thus, there was no reason to deaverage the rates for DS3 loops.

11

12 **4. The Distribution Subloop**

13 **Q. What is Verizon VA's unbundled distribution subloop arrangement?**

14 A. The distribution subloop is also known as an Unbundled Subloop
15 Arrangement (USLA).³⁵ It provides a CLEC with access to Verizon VA's
16 metallic distribution pairs/facilities at Verizon VA's FDI.³⁶ USLA provides a
17 two-wire or four-wire transmission channel between the TOPIC and the NID

³⁵ "USLA" is Verizon's product name for the loop distribution.

³⁶ The FDI is the physical box in the field where the distribution cable pairs are cross-connected with the feeder cable pairs. Verizon VA will place a cable from its FDI to the CLEC's equivalent of the FDI, called the TOPIC. There is a diagram of this arrangement in the accompanying subloop cost study workbook.

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1 or Rate Demarcation Point at the end user location. USLA can be used by
2 the CLEC to provide new service to an end user. The new service may
3 include either reactivation of service to an end user's location (*e.g.*, re-use old
4 drop cable and NID) or the establishment of original service (*e.g.*, provide a
5 new drop cable and NID) to the end user's location, where facilities exist.
6 There are distribution pairs currently in the network that provide Verizon
7 VA's retail service that can be converted to USLA. Both recurring and non-
8 recurring charges apply to USLA. The non-recurring charges are calculated
9 in the NRC study.

10

11 **Q. Please explain how the costs for the distribution unbundled subloop**
12 **arrangement were developed.**

13 **A.** The rate for the USLA is comprised of two cost components: loop costs and
14 the associated OSS costs. Total loop cost components by density cell were
15 separated between feeder components and distribution components. The pole
16 costs were divided between feeder and distribution based on the percentage
17 of aerial distribution structure to total aerial structure costs. The associated
18 conduit costs were divided between feeder and distribution based on the
19 percentage of underground distribution structure to total underground
20 structure costs.

21 The distribution subloop rate also includes a component for subloop
22 operations support systems development and maintenance of OSS costs

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1 associated with providing subloops, which will be explained in more detail
2 below.

3

4 **5. Unbundled Feeder Subloop**

5 **Q. Please describe Verizon VA's feeder subloop element.**

6 A. Feeder subloop is also known as an Unbundled Feeder Sub Element
7 (UFSE).³⁷ It is a DS1-DS3 transmission path over a feeder facility in
8 Verizon VA's network. The loop feeder is the transmission path from
9 Verizon VA's central office to the FDI. As described above, this
10 transmission path can be either copper cable or fiber-fed DLC. As with
11 unbundled distribution subloops, both non-recurring and recurring charges
12 apply to this arrangement; the non-recurring costs are addressed in VZ-VA
13 CS, Vol. XI, Part H.

14

15 **Q. Please explain how the costs for the feeder unbundled subloop**
16 **arrangement were developed.**

17 A. The recurring costs for the DS1 element were developed as described above
18 for the distribution unbundled subloop. The costs for the feeder portion of
19 the loop were based on the information developed in the DS1 Loop Study.

³⁷ "UFSE" is Verizon's product name for the loop feeder.

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1 They also include a component for subloop OSS development and
2 maintenance costs. The DS3 feeder subloop costs are based on the DS3 loop
3 study described above, but include cable and structure-related costs
4 associated with just the feeder loop length. The DS3 costs also include a
5 component for subloop OSS development and maintenance costs. The non-
6 recurring costs are addressed in the non-recurring cost study.

7
8 **Q. What OSS costs has Verizon VA identified that it will incur due to**
9 **subloop unbundling?**

10 **A. The subloop OSS costs represent three Telcordia-provided programming**
11 **projects: Loop Through, Support for Constrained Loop Assignment, and**
12 **Enhanced Partial Reuse.**

13 The first project will introduce a new provisioning method for
14 subloop unbundled service that will allow the outside plant work that
15 involves CLEC facilities to be performed at a different time from the outside
16 plant work involving ILEC facilities. The second will allow the cable and
17 pair information, *i.e.*, information about where the CLEC's facilities meet
18 Verizon VA's facilities, to be put on the service order. The third project will
19 allow assignment for two-wire processing to be performed by the OSS on
20 change orders by considering a customer's existing assignment, *i.e.*, switch
21 designation, when processing a new order for subloop. This will preserve
22 any field-side segments that remain valid for the changed service.

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1 The OSS Telcordia project costs were capitalized; therefore, the
2 project dollars were multiplied by the capital ACF. In addition, Verizon
3 identified annual software maintenance dollars and added them to the annual
4 capital costs for the OSS project costs, which were then divided by the
5 levelized annual forecast of lines (including both subloops and line sharing).
6 Verizon divided this amount by 12 to convert to a monthly cost per line. As
7 mentioned above, this OSS cost was included in each of the subloop rate
8 elements.

9
10 **6. Dark Fiber**

11 **Q. What is Dark Fiber?**

12 **A. Dark fiber consists of a continuous fiber optic strand within an existing in-**
13 **place fiber optic sheath that is owned by Verizon VA, but is not connected to**
14 **electronic equipment needed to power the line in order to transmit**
15 **information. (Since information is transmitted on fiber optic cable in the**
16 **form of light pulses, a fiber without the necessary electronics is appropriately**
17 **described as "dark.") A CLEC that requests access to dark fiber is**
18 **responsible for the establishment of any fiber optic transmission equipment**
19 **or intermediate repeaters needed to utilize the fiber to transmit information.**

20
21 **Q. Please describe what is meant by "continuous" fiber optic strand?**